



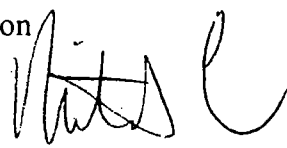
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

OCT 09 2008

MEMORANDUM

TO: James Burke, Director, Hazardous Site Cleanup Division

FROM: Mitch Cron, RPM, Western PA/MD Remedial Branch 

THROUGH: Linda Dietz, Branch Chief, Western PA/MD Remedial Branch

SUBJECT: Bally Ground Water Administrative Order on Consent (AOC) and response to comments received on the AOC

This is a response to comments that were received for an Administrative Order on Consent (AOC) between EPA and American Household Inc. The comments were received during a 30-day public comment period on the cost compromise in the AOC that was established by Federal Register notice. The AOC was initiated by EPA to address trichlorethene (TCE) contamination present in indoor air, and in subslab soil vapor beneath two tenant spaces at the Bally Brook Industrial Park. TCE in indoor air has been measured as high as 490 micrograms per cubic meter (ug/m^3), and TCE in subslab soil vapor has been measured as high as 4,200,000 ug/m^3 . The TCE contamination in indoor air is Site-related, and is not related to tenant activities.

The United States Environmental Protection Agency (EPA) prepared the AOC for the Bally Ground Water Contamination Superfund Site (Site) located in Bally, Berks County, Pennsylvania. The AOC is identified as Docket No. CERC-03-2008-0092DC, and is attached to this memorandum.

The AOC requires the Respondent, American Household Inc. (AHI), to perform a removal action to address vapor intrusion of hazardous substances into indoor air at two tenant spaces located in a commercial/industrial facility identified as the Bally Brook Industrial Park. Pursuant to the AOC, in consideration of AHI's performance of the removal action, EPA will provide AHI with a covenant not to sue for reimbursement of oversight costs incurred by EPA with respect to the AOC.

The AOC was signed by the Respondent during June 2008. Because the AOC provides AHI with a covenant not to sue for reimbursement of oversight costs, a notice was published in the Federal Register (Vol. 73, No 144, Friday July 24, 2008, Notices) to solicit comment from the public on the cost compromise in the AOC.

One comment letter was received. Arcadis U.S. Inc. (Arcadis), a consultant for the Respondent AHI who acts as the project coordinator for the Site, provided the comment letter on behalf of AHI. Initially, EPA notes that it is an irregular practice for a Respondent, who has participated in negotiations with the Agency and signed an Administrative Order on Consent, to subsequently submit a comment during a public comment period that critiques the same Order. The Bally

Order, signed by the Respondent, provides that "The Respondent consents to and will not contest EPA's authority or jurisdiction to issue or to enforce this Settlement Agreement (paragraph 1.4)." The comments received from Arcadis/AHI primarily pertain to the toxicity of trichloroethene (TCE, a Site-related hazardous substance), and question the need to perform the removal action. Arcadis/AHI's comments and EPA's responses are included below.

In responding to Arcadis/AHI's comments, EPA has carefully considered different sources of TCE toxicity information which exist in the scientific and regulatory community, including EPA's 2001 draft risk assessment, and subsequent reviews of the EPA draft risk assessment by the Science Advisory Board, and National Academy of Science, the TCE toxicity values from California EPA, and the evaluation of TCE toxicity performed by New York State Department of Health (discussed in detail below). As described in the specific responses to Arcadis/AHI's comments, EPA will evaluate and consider the range of TCE toxicity values which exist in the scientific and regulatory community in determining what toxicity values for TCE (cancer slope factors, as well as non-cancer values such as reference concentrations) are appropriate and which will be used to demonstrate compliance with performance standards for the removal action described in the AOC. These performance standards must address both cancer and non-cancer risks, as stated in the AOC, and as signed by AHI during June 2008, following significant negotiation.

Furthermore, EPA's response is based on Site conditions including, but not limited to, the nature of the uses of the tenant spaces of concern, the presence of TCE in sub slab soil vapor beneath the tenant spaces and within the tenant spaces, and the lack of indoor sources of TCE in those tenant spaces. In consideration of these Site conditions, and based on our review of the above sources of TCE toxicity information, it remains necessary to perform the removal action described in the AOC to address the threat to public health in the Bally Brook Industrial Park (as described in the AOC) posed by the actual and potential exposure to Site-related hazardous substances.

EPA Region III has concluded that the determinations included in Section V. of the AOC remain appropriate. Those determinations are as follows:

- The actual and/or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health or welfare or the environment (AOC, Section 5.1).
- The Work (described in the AOC) is necessary to protect public health and welfare and the environment (AOC, Section 5.2).
- Because there is a threat to public health or welfare or the environment, a removal action is appropriate to abate, minimize, stabilize, mitigate, or eliminate the release or threat of release of hazardous substances at or from the Site (AOC, Section 5.3).

For the reasons set forth below, EPA has determined that AHI has not yet complied with the statement of purpose included in the AOC. The requirements set forth in the AOC have not been met.

I recommend that you sign the AOC.

Response to public comment on the AOC

EPA received one comment letter during the public comment period for the AOC. Arcadis, Respondent's consultant, provided the comment letter, dated August 21, 2008, on behalf of AHI. Arcadis/AHI's comments and EPA response are included below.

Arcadis/AHI Comment #1, Arcadis/AHI letter, page 1, paragraph 4, page 2, paragraph 1:

"The AOC requires AHI to, inter alia, "[p]revent subsurface soil vapor from migrating into the Impress Industries tenant space and Luciana and Son tenant space through design, construction and operation of a system (the "system") that shall reduce indoor air concentrations of Site-related hazardous substances to levels which represent risk levels at or below 1E4 (cancer risk) and 1 (hazard index, non-cancer risk)." AOC, Paragraph 8.3.

"At the time AHI executed the AOC, ARCADIS had based its risk assessment for trichloroethylene (TCE) on a provisional inhalation cancer slope factor (CSF) from the United States Environmental Protection Agency (USEPA 2001) draft Trichloroethylene Health Risk Assessment: Synthesis and Characterization. USEPA's risk assessment continues to undergo review and revisions. However, USEPA (2008a) has recently published Regional Screening Levels for TCE based on a joint effort between Regions 3 and 9. ARCADIS has recalculated the risks for the Impress area based upon the toxicity values and equations provided in the Regional Screening Level tables. Based upon that recalculation, the performance standard contained in Paragraph 8.3 has been met. In other words, the calculated risk levels are at or below 1E4 (cancer risk)."

EPA Response:

Arcadis/AHI's basic claim in these paragraphs is that the performance standard of a 1E-4 cancer risk has already been met when one uses EPA's Regional Screening Table to obtain a cancer toxicity factor for TCE. (The actual performance standard specified in the AOC is 1E-4, not 1E4 as cited by Arcadis/AHI.)

However, Arcadis/AHI is using the Regional Screening Table, and the TCE toxicity factors found there, in ways that were not intended by EPA when it generated that table. Moreover, as will be discussed later in this memo, the AOC requires non-cancer hazard to be addressed in addition to cancer risk.

a. First, the Regional Screening Table was not intended to generate site-specific Removal cleanup goals.

The Regional Screening Table was developed by the Oak Ridge National Laboratory (ORNL) under an Interagency Agreement with EPA, with input from EPA Regions III, VI, and IX. These three EPA Regions have historically had their own versions of screening tables (also called RBC or PRG tables), but the combined Regional Screening Table was an effort to improve consistency and incorporate updated guidance.

The appropriate use for the Regional Screening Table is discussed in a May 27, 2008 memorandum prepared by EPA Region III. The Regional Screening Table was designed to support the Superfund risk assessment screening process. It displays chemical screening levels corresponding to a cancer risk of $1E-6$, or a hazard index (to consider non-cancer risk) of 1, whichever value is lower. Its primary use is to screen chemicals during the baseline risk assessment, and to help determine whether chemicals should be carried forward into a site-specific risk assessment for further evaluation. It generally does not represent cleanup levels and is not reflective of the $1E-4$ cancer risk level. Cleanup levels are determined on a Site specific basis, in accordance with the criteria listed in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

b. Second, trichloroethene (TCE) is a probable human carcinogen for which consensus toxicity values do not currently exist. The TCE toxicity factor included in the Regional Screening Tables is suitable for screening at the $1E-6$ cancer-risk level. However, Arcadis/AHI is attempting to apply it at the $1E-4$ cancer-risk level, without considering the appropriate and necessary caveats.

As described in Office of Solid Waste and Emergency Response (OSWER) Directive 9355.0-30 ("Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions", 1991), EPA uses the general $1E-4$ (1 in 10,000) to $1E-6$ (1 in 1,000,000) cancer risk range as a "target range" within which the Agency strives to manage risks as part of a Superfund Cleanup. Accordingly, a risk of $1E-4$ represents a higher cancer level than $1E-6$.

The hazardous substance which is the primary risk driver for the removal action described in the Bally AOC is trichloroethene (TCE). The toxicological information included in the Regional Screening Table does not represent EPA-wide consensus toxicity values for TCE, nor was it ever intended to do so.

As described in EPA's OSWER Directive 9285.7-53, EPA has a hierarchy of toxicity factors that are used in Superfund risk assessments. Tier 1 consists of EPA consensus values found in the Integrated Risk Information System database; Tier 2 values are provisional peer-reviewed toxicity values developed by EPA's National Center for Environmental Assessment. TCE has neither Tier 1 nor Tier 2 values. Therefore, risk assessors must evaluate Tier 3 toxicity information for TCE, "additional EPA and non-EPA sources."

For inhalation cancer risk, the Regional Screening Table used a Tier 3 value from California EPA. This value was used to generate a screening concentration for the 1E-6 cancer-risk level. TCE is specifically discussed in the May 27, 2008 EPA memorandum as follows:

"TCE does not currently have EPA consensus toxicity factors ... The Regional Screening table uses California EPA toxicity factors, following the Superfund hierarchy for toxicity values. However, it may be appropriate to consider multiple estimates of TCE risk ... ***Users are cautioned that both cancer and non-cancer risk should be considered for TCE, particularly when cancer risks in the upper end of EPA Superfund's 1E-6 to 1E-4 risk range are being considered.*** Generally, however, screening is conducted at the 1E-6 risk level. Consult your regional risk assessor with any questions about evaluating TCE at Region III sites." [emphasis added]

Note the emphasized language. As described in the AOC, the objective of the removal action is to reduce cancer risk at the Site from vapor intrusion to 1E-4 cancer risk, the upper end of the acceptable risk range (1E-4 to 1E-6). At the upper end of the cancer risk range, evaluation of non-cancer risk is also appropriate and necessary for TCE. The Regional Screening Table did not select a Tier 3 non-cancer toxicity value, because the Regional Screening Table reflects 1E-6 cancer risk. Arcadis/AHI misinterprets this fact, as described below.

Arcadis/AHI Comment #2, Arcadis/AHI letter, page 2, paragraph 1:

"USEPA's comments on the new Regional Screening Levels indicate that cancer risks dominate the evaluation of TCE and as such, evaluation of non-cancer endpoints is not necessary. Similar to other constituents without available non-cancer toxicity values, non-cancer hazards are not considered to be significant and overall site risks are evaluated solely on the results of the cancer risk calculations. As USEPA has not finalized or identified any non-cancer toxicity values for TCE, it must be assumed that non-cancer endpoints are insignificant compared to carcinogenic effects. Moreover, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) allows the evaluation of cancer risks between 1×10^{-4} to 1×10^{-6} . In the absence of non-cancer toxicity values, there is no threshold at which non-cancer hazards would need to be considered. USEPA's documentation for the Regional Screening Levels does not indicate an additional threshold at 1×10^{-5} and there is no precedent to support this assertion in the absence of non-cancer toxicity values (as is the case with TCE)."

EPA Response:

Arcadis/AHI is taking statements meant to apply to TCE at the 1E-6 cancer-risk level, and misapplying them at the 1E-4 risk level. The performance standards in the AOC require consideration of TCE cancer and non-cancer risk, not cancer risks solely.

Arcadis/AHI has not appropriately used the Regional Screening Table, and the toxicological information included therein. In part, Arcadis/AHI is referring in this paragraph to frequently

asked question #19 from the Regional Screening Table, which pertains to TCE toxicity. This frequently asked question and response is included as follows:

- Frequently Asked Question (FAQ) #19 [from Regional Screening Table]: What toxicity values are used for TCE? TCE currently has no USEPA consensus toxicity value, and multiple estimates of TCE risk may be appropriate. Consult your regional risk assessor to determine whether your region or state has recommended TCE values. The toxicity hierarchy discussed in this FAQ was followed and the resulting toxicity values, except for the reference concentration (RfC), for TCE are from the California Environmental Protection Agency/Office of Environmental Health Hazard Assessment's toxicity values: (<http://www.oehha.ca.gov/risk/ChemicalDB/index.asp>). After evaluating the Tier 3 sources for noncarcinogenic toxicity values, we have elected not to choose any noncancer toxicity values for TCE. Rather, we will allow cancer-risk considerations to dominate the evaluation of TCE as they are protective of noncancer risks as well.

For the purpose of screening remedial sites at the 1E-6 cancer-risk level (which is the purpose of the Regional Screening Table), the above response is appropriate, and protection from non-cancer hazards is anticipated. The fact that EPA has not identified a non-cancer number on the screening table does not mean that "non-cancer endpoints are insignificant," but that they are generally not significant *at the 1E-6 cancer risk level* for residential risks. However, as discussed above with reference to EPA's May 27, 2008 memo, the relationship between cancer risk and non-cancer risk changes for TCE at higher cancer risks. At cancer risk levels above 1E-5, such as those estimated by both Arcadis/AHI and EPA to occur at the Bally Site, non-cancer risks may begin to dominate TCE risk considerations. In their letter, Arcadis/AHI states, "*As USEPA has not finalized or identified any non-cancer toxicity values for TCE, it must be assumed that non-cancer endpoints are insignificant compared to carcinogenic effects.*" Arcadis/AHI has concluded that because non-cancer toxicological information was not included in the Regional Screening Table for TCE, EPA does not consider non-cancer risks posed by TCE to receptors. This assertion is entirely incorrect.

EPA will evaluate and consider the range of TCE toxicity values which exist in the scientific and regulatory community in determining what toxicity values for TCE (cancer slope factors, as well as non-cancer values such as reference concentrations) are appropriate and which will be used to demonstrate compliance with performance standards for the removal action described in the AOC. These performance standards must address both cancer and non-cancer risks, as stated in the AOC.

Arcadis/AHI Comment #3, Arcadis/AHI letter, page 2, paragraph 2:

"In email discussions with USEPA concerning this issue, USEPA referred to the New York State Department of Health (NYSDOH 2006) indoor air guideline for TCE as a way to evaluate noncancer endpoints. This guideline is neither an applicable or relevant and

appropriate requirement (ARAR) for this site, nor a regional recommended value. We are not aware of any promulgated Region III recommended noncancer toxicity values for TCE. If USEPA believed that the toxicity values identified by NYSDOH or the National Center for Environmental Assessment (NCEA) were appropriate for evaluating noncancer endpoints, then these would have been included in the Regional Screening Level table (USEPA 2008a). Instead, the absence of these values indicates that noncancer endpoints do not need to be evaluated. USEPA Region III appears to concur with this decision as the website states, "beginning in spring 2008, Region III will rely for its RBC Table updates on the Regional Screening table developed by Oak Ridge National Laboratory under an Interagency Agreement with EPA". (<http://www.epa.gov/reg3hscd/risk/human/index.htm>)"

EPA Response:

Cleanup goals for TCE must address cancer and non-cancer risk, not cancer risks solely.

As noted above, at the cancer-risk level of 1E-4 (the performance standard specified in the AOC), non-cancer concerns become important for TCE. The AOC sets a non-cancer performance standard of a Hazard Index of 1.

Arcadis/AHI claims that the Regional Screening Table's nonselection of a non-cancer toxicity value for TCE means that EPA has determined that non-cancer toxicity is not significant for TCE. As has already been demonstrated above, this is not the case, especially at higher cancer-risk levels such as 1E-4.

Furthermore, Arcadis/AHI acknowledges that EPA mentions a possible Tier 3 non-cancer assessment, NYSDOH. Arcadis/AHI rejects the NYSDOH value on the grounds that it is not an ARAR; has not been "promulgated" by Region III; and is not on the Regional Screening Table. As the latter point has already been addressed (see responses to Arcadis/AHI comments #2 and #3), the next paragraph focuses on the first two points.

EPA does not disagree that the NYSDOH value may not be an ARAR, as Arcadis/AHI asserts. However, a toxicity value need not be an ARAR to be incorporated into a risk assessment or used to derive a cleanup level. The Region also does not "promulgate" toxicity values, but incorporates toxicity values from the scientific literature into site-specific risk assessments, generally following the OSWER Directive 9285.7-53 hierarchy already discussed. NYSDOH's assessment is a legitimate source of information for consideration as Tier 3, and as such will be considered by EPA for application at the Bally site.

EPA Region III acknowledges that there may be many Tier 3 values appropriate for risk evaluation of TCE. EPA will evaluate and consider the range of TCE toxicity values which exist in the scientific and regulatory community in determining what toxicity values for TCE (cancer slope factors, as well as non-cancer values such as reference concentrations) are appropriate and

which will be used to demonstrate compliance with performance standards for the removal action described in the AOC. These performance standards must address both cancer and non-cancer risks, as stated in the AOC.

Arcadis/AHI Comment #4, Arcadis/AHI letter, page 2, paragraph 3, and remainder of letter:

"USEPA has indicated in its response to frequently asked questions that it has not identified noncancer toxicity values for TCE because cancer risk considerations are protective of noncancer risks as well.; again concurring with the decision not to evaluate noncancer hazards.

"Frequently Asked Question (FAQ) #19 [from Regional Screening Table]: What toxicity values are used for TCE? TCE currently has no USEPA consensus toxicity value, and multiple estimates of TCE risk may be appropriate. Consult your regional risk assessor to determine whether your region or state has recommended TCE values. The toxicity hierarchy discussed in this FAQ was followed and the resulting toxicity values, except for the reference concentration (RfC), for TCE are from the California Environmental Protection Agency/Office of Environmental Health Hazard Assessment's toxicity values: (<http://www.oehha.ca.gov/risk/ChemicalDB/index.asp>). After evaluating the Tier 3 sources for noncarcinogenic toxicity values, we have elected not to choose any noncancer toxicity values for TCE. Rather, we will allow cancer-risk considerations to dominate the evaluation of TCE as they are protective of noncancer risks as well.' (USEPA 2008b)

"The values at the Bally Site meet the cancer risk levels and performance goals specified in Paragraph 8.3 of the AOC. Therefore, the purpose of the AOC as specified in Section 2.1 has been met and no removal action is necessary. AHI is already in compliance with the Statement of Purpose and execution of the AOC by USEPA is not necessary."

EPA Response:

For the reasons set forth below, EPA has determined that AHI has not yet complied with the statement of purpose included in the AOC. The requirements set forth in the AOC have not been met.

This portion of the Arcadis/AHI letter is repetitive and restates Arcadis/AHI's misunderstanding of the purpose of the Regional Screening Table, and of that table's approach to TCE. Please see above Responses. Based on a review of Site conditions it remains necessary to perform the removal action described in the AOC to address the threat to public health posed by the actual and potential exposure of workers in the Bally Brook Industrial Park (as described in the AOC) to Site-related hazardous substances.

In addition to the above specific responses, the following are important factors with respect to the Bally AOC:

TCE detected in indoor air at Impress Industries, and in soil vapor beneath the Impress Industries, is elevated and related to the Superfund Site, not to tenant activities.

With regard to the removal action described in the AOC, the tenant space of greatest concern is identified as Impress Industries. The Impress Industries space is used for shipping and receiving of cardboard boxes and is typically occupied by one to three workers. EPA is not aware of an indoor source of TCE at Impress Industries or the adjacent tenant space of concern, identified as Luciana and Sons, a company which produces molded sinks and bathtubs. An evaluation performed by the EPA Trace Atmospheric Gas Analyzer (TAGA) equipment further supported that the presence of TCE in indoor air at the tenant spaces is related to the Site, and not to current tenant activities. Review of historical aerial photographs indicates that the Impress Industries tenant space is underlain by two waste impoundments, which were constructed over sometime between 1955 and 1965. Arcadis has collected sub slab soil vapor samples beneath the Impress Industries tenant space which have identified TCE concentrations directly beneath the tenant space as high as 4,200,000 ug/m³. Indoor air sampling within the Impress Industries tenant space has revealed an average concentration of TCE of 154 ug/m³, and a maximum concentration of 490 ug/m³ (based on seven indoor air samples collected during 2006 and 2007).

TCE detected in indoor air at Impress Industries constitutes an imminent and substantial endangerment to public health.

When a risk evaluation was initially performed by EPA for the indoor air concentrations, EPA used the toxicity information for TCE (cancer slope factor, and reference concentration for non-cancer risk) present in the EPA draft Trichloroethylene Health Risk Assessment: Synthesis and Characterization (2001). This risk conclusions reached by EPA are included in the AOC (Section 3.15). As described in Section 3.17 of the AOC, on April 13, 2007, based on the sub slab soil vapor and indoor air samples collected at the Impress Industries and Luciana and Sons tenant spaces, the Division Director of the EPA Region III Hazardous Site Cleanup Division determined that the release or threatened release of hazardous substances at and/or from the Site presents or may present an imminent and substantial endangerment to the public health or welfare or to the environment.

EPA has considered numerous sources of TCE toxicity information, and removal action is necessary to address TCE in indoor air at the Site.

EPA has carefully considered different sources of TCE toxicity information which exist in the scientific and regulatory community, including EPA's 2001 draft risk assessment, and subsequent reviews of the EPA draft risk assessment by the Science Advisory Board, and National Academy of Science, the TCE toxicity values from California EPA, and the evaluation of TCE toxicity performed by New York State Department of Health. Based on a review of these sources of TCE toxicity information, and in consideration of Site conditions (including the presence of TCE in sub slab soil vapor beneath the tenant spaces, and within the tenant spaces), EPA Region III has concluded that the determinations included in Section V. of the AOC remain appropriate.

As described in the specific responses to Arcadis/AHI's comments, EPA will evaluate and consider the range of TCE toxicity values which exist in the scientific and regulatory community in determining what toxicity values for TCE (cancer slope factors, as well as non-cancer values such as reference concentrations) are appropriate and which will be used to demonstrate compliance with performance standards for the removal action described in the AOC. These performance standards must address both cancer and non-cancer risks, as stated in the AOC, and as signed by AHI during June 2008, following significant negotiation.

Arcadis/AHI Comment #5, Arcadis/AHI letter, page 1 paragraphs 2 and 3:

"ARCADIS is providing this Letter of Comment on behalf of American Household, Inc. (AHI), formerly known as Sunbeam Corporation, the Respondent, in the above entitled AOC.

"As a preliminary matter, please be advised that we believe the Federal Register publication notice may be defective. The notice provides that comments should be addressed to you and should "refer to the Malvern TCE Superfund Site, East Whiteland Township, Chester County, Pennsylvania." Therefore, it is very possible that any comments with respect to the Bally Site may have been misdirected. Despite the possible defective nature of the publication and the possible need to republish a correct notice, AHI is providing this Letter of Comment with what it believes to be the correct reference."

EPA Response:

The Federal Register notice is not defective, and neither an additional Federal Register notice nor additional public comment period are necessary or appropriate.

Although a clerical error is present in the Federal Register notice, EPA does not consider the notice to be defective and does not consider an additional public notice or comment period to be necessary. Ms. Lydia Guy, Regional Hearing Clerk, has confirmed that she received only one set of comments in response to the Federal Register notice, and did not receive comments from the public pertaining to the AOC which had been addressed to the Malvern TCE Site. In addition, Ms. Guy confirmed that she has not received comments pertaining to the Malvern Site. Finally, EPA notes that the Bally Ground Water Site was referenced several times in the Federal Register notice.

In conclusion, EPA has carefully considered different sources of TCE toxicity information which exist in the scientific and regulatory community, including EPA's 2001 draft risk assessment, and subsequent reviews of the EPA draft risk assessment by the Science Advisory Board, and National Academy of Science, the TCE toxicity values from California EPA, and the evaluation of TCE toxicity performed by New York State Department of Health. Based on a review of these sources of TCE toxicity information, and in consideration of Site conditions (including the presence of TCE in sub slab soil vapor beneath the tenant spaces, and within the tenant spaces),

EPA Region III has concluded that the determinations included in Section V. of the AOC remain appropriate.

Further, as described in the specific responses to Arcadis/AHI's comments set forth above, EPA will evaluate and consider the range of TCE toxicity values which exist in the scientific and regulatory community in determining what toxicity values for TCE (cancer slope factors, as well as non-cancer values such as reference concentrations) are appropriate and which will be used to demonstrate compliance with performance standards for the removal action described in the AOC. These performance standards must address both cancer and non-cancer risks, as stated in the AOC, and as signed by AHI during June 2008, following significant negotiation.